

WHAT IS CLAIMED IS:

1. A transaction management device, connected through a network with a plurality of shop computers providing  
5 electronic shops on the network and a plurality of client computers used by users utilizing the electronic shops, the transaction management device comprising:

10 a management unit configured to manage transaction information for each transaction currently in progress between one electronic shop among the plurality of electronic shops and one user among the plurality of users, the transaction information containing a set of: a first information for identifying said each transaction; a second information for identifying said one user; a third  
15 information for identifying said one electronic shop; and a fourth information for indicating a state of said each transaction as one of a plurality of possible states including a first state in which a command for finalizing completion or failure of transaction is waited, a second  
20 state in which a command for finalizing completion of transaction is received and a processing for finalizing completion of transaction is started but not finished yet, a third state in which the processing for finalizing completion of transaction is finished, and a fourth state  
25 in which failure of transaction is already finalized; and a processing unit configured to process said each transaction according to the transaction information managed by the management unit.

30 2. The transaction management device of claim 1, wherein the processing unit carries out a collective processing for finalizing completion or failure of a plurality of transactions collectively by carrying out a prescribed procedure with shop computers corresponding to the  
35 plurality of transactions, upon receiving a command for

finalizing completion or failure of the plurality of transactions for which the transaction information has the fourth information indicating the first state, from a client computer.

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3. The transaction management device of claim 2, wherein when a command for finalizing completion of the plurality of transactions is received, the processing unit inquires each shop computer corresponding to a transaction among the plurality of transactions as to whether the processing for finalizing completion of transaction can be completed for a corresponding transaction or not, commands said each shop computer to complete the processing for finalizing completion of transaction for the corresponding transaction when the processing for finalizing completion of transaction can be completed for all of the plurality of transactions, or commands said each shop computer to cancel the corresponding transaction such that all of the plurality of transactions are cancelled when the processing for finalizing completion of transaction cannot be completed for at least one of the plurality of transactions.

4. The transaction management device of claim 3, wherein the processing unit also notifies a personal information of a user related to the corresponding transaction at a time of commanding said each shop computer to complete the processing for finalizing completion of transaction for the corresponding transaction.

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5. The transaction management device of claim 1, wherein the processing unit detects each transaction information for which the fourth information continues to indicate one state other than final states over a prescribed period of time or not, re-transmits a corresponding message when said

one state is a state in which a reply to an already transmitted message is waited, and initializes a time for which the fourth information of said each transaction information continues to indicate said one state.

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6. The transaction management device of claim 1, wherein the processing unit detects each transaction information for which the fourth information continues to indicate the first state over a prescribed period of time, and commands a shop computer corresponding to said each transaction, information to cancel a corresponding transaction.

7. The transaction management device of claim 1, wherein when a client computer of a particular user re-accesses the transaction management device, the processing unit creates a notification information according to the state indicated by the fourth information of each transaction information which has the second information corresponding to the particular user and transmits the notification information to the client computer of the particular user.

8. The transaction management device of claim 1, wherein the management unit also manages each transaction information which has the fourth information indicating the third state as a past transaction log, and when a request for transmitting transaction logs satisfying a prescribed condition is received from a client computer of a particular user, the processing unit generates a transaction log information according to each transaction information that has the fourth information indicating the third state, that has the second information corresponding to the particular user, and that satisfies the prescribed condition, and transmits the transaction log information to the client computer of the particular user.

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9. The transaction management device of claim 1, wherein the processing unit transmits the command for finalizing completion of transaction for a particular transaction information which has the fourth information indicating the first state as received from a client computer of a particular user related to the particular transaction information, to a shop computer of a particular electronic shop related to the particular transaction information, and the processing unit transmits a notice of a completion of the processing for finalizing completion of transaction for the particular transaction information as received from the shop computer of the particular electronic shop, to the client computer of the particular user.

10. A method for realizing electronic commerce between a plurality of shop computers providing electronic shops on a network and a plurality of client computers used by users utilizing the electronic shops, comprising:

managing transaction information for each transaction currently in progress between one electronic shop among the plurality of electronic shops and one user among the plurality of users, at a transaction management computer, the transaction information containing a set of: a first information for identifying said each transaction; a second information for identifying said one user; a third information for identifying said one electronic shop; and a fourth information for indicating a state of said each transaction as one of a plurality of possible states including a first state in which a command for finalizing completion or failure of transaction is waited, a second state in which a command for finalizing completion of transaction is received and a processing for finalizing completion of transaction is started but not finished yet, a third state in which the processing for finalizing completion of transaction is finished, and a fourth state

in which failure of transaction is already finalized; and  
processing said each transaction according to the  
transaction information managed by the managing step, at  
the transaction management computer.

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11. The method of claim 10, wherein the processing step  
carries out a collective processing for finalizing  
completion or failure of a plurality of transactions  
collectively by carrying out a prescribed procedure with  
10 shop computers corresponding to the plurality of  
transactions, upon receiving a command for finalizing  
completion or failure of the plurality of transactions for  
which the transaction information has the fourth  
information indicating the first state, from a client  
15 computer.

12. The method of claim 11, wherein when a command for  
finalizing completion of the plurality of transactions is  
received, the processing step inquires each shop computer  
20 corresponding to a transaction among the plurality of  
transactions as to whether the processing for finalizing  
completion of transaction can be completed for a  
corresponding transaction or not, commands said each shop  
computer to complete the processing for finalizing  
25 completion of transaction for the corresponding transaction  
when the processing for finalizing completion of  
transaction can be completed for all of the plurality of  
transactions, or commands said each shop computer to cancel  
the corresponding transaction such that all of the  
30 plurality of transactions are cancelled when the processing  
for finalizing completion of transaction cannot be  
completed for at least one of the plurality of  
transactions.

35 13. The method of claim 12, wherein the processing step

also notifies a personal information of a user related to the corresponding transaction at a time of commanding said each shop computer to complete the processing for finalizing completion of transaction for the corresponding  
5 transaction.

14. The method of claim 10, wherein the processing step detects each transaction information for which the fourth information continues to indicate one state other than  
10 final states over a prescribed period of time or not, re-transmits a corresponding message when said one state is a state in which a reply to an already transmitted message is waited, and initializes a time for which the fourth information of said each transaction information continues  
15 to indicate said one state.

15. The method of claim 10, wherein the processing step detects each transaction information for which the fourth information continues to indicate the first state over a  
20 prescribed period of time, and commands a shop computer corresponding to said each transaction information to cancel a corresponding transaction.

16. The method of claim 10, wherein when a client computer  
25 of a particular user re-accesses the transaction management device, the processing step creates a notification information according to the state indicated by the fourth information of each transaction information which has the second information corresponding to the particular user and  
30 transmits the notification information to the client computer of the particular user.

17. The method of claim 10, wherein the managing step also manages each transaction information which has the fourth  
35 information indicating the third state as a past

transaction log, and when a request for transmitting transaction logs satisfying a prescribed condition is received from a client computer of a particular user, the processing step generates a transaction log information according to each transaction information that has the fourth information indicating the third state, that has the second information corresponding to the particular user, and that satisfies the prescribed condition, and transmits the transaction log information to the client computer of the particular user.

18. The method of claim 10, wherein the managing step acquires any information that is constituting the transaction information and generated at a client computer of said one user or a shop computer of said one electronic shop, from the client computer of said one user through the shop computer of said one electronic shop.

19. The method of claim 10, wherein the processing step transmits the command for finalizing completion of transaction for a particular transaction information which has the fourth information indicating the first state as received from a client computer of a particular user related to the particular transaction information, to a shop computer of a particular electronic shop related to the particular transaction information, and

the processing step transmits a notice of a completion of the processing for finalizing completion of transaction for the particular transaction information as received from the shop computer of the particular electronic shop, to the client computer of the particular user.

20. A computer usable medium having computer readable program codes embodied therein for causing a computer to function as a transaction management computer, the computer

readable program codes include:

5 a first computer readable program code for causing  
said computer to manage transaction information for each  
transaction currently in progress between one electronic  
shop among the plurality of electronic shops and one user  
among the plurality of users, the transaction information  
containing a set of: a first information for identifying  
said each transaction; a second information for identifying  
said one user; a third information for identifying said one  
10 electronic shop; and a fourth information for indicating a  
state of said each transaction as one of a plurality of  
possible states including a first state in which a command  
for finalizing completion or failure of transaction is  
waited, a second state in which a command for finalizing  
15 completion of transaction is received and a processing for  
finalizing completion of transaction is started but not  
finished yet, a third state in which the processing for  
finalizing completion of transaction is finished, and a  
fourth state in which failure of transaction is already  
20 finalized; and

a second computer readable program code for causing  
said computer to process said each transaction according to  
the transaction information managed by the first computer  
readable program code.

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